

PATENT COOPERATION TREATY

PCT

REC'D 25 JAN 2005

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY PCT
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ---		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/DK2003/000713	International filing date (day/month/year) 21.10.2003	Priority date (day/month/year) 21.10.2002	
International Patent Classification (IPC) or national classification and IPC F16K 15/02 // F16K 15/18, F16K 17/04			
Applicant Cubeair A/S et al			

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 14.05.2004	Date of completion of this report 12.01.2005
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Sune Söderling / JA A Telephone No. +46 8 782 25 00

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-35</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-35</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-35</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Cited documents:

D1: US 2 498 482 A

D2: US 4 131 235 A

D1 discloses a check valve with a fluid inlet chamber and a fluid outlet chamber and partition means separating said chambers, said partition means having a bore connecting said chambers and a valve seat at each of the opposite ends of said bore. A valve seat at each of said chambers is arranged to cooperate with the respective valve seat to close communication between the respective chamber and bore. A stem is extending through said bore connecting said valves to each other in spaced relation a distance exceeding the length of said bore. Spring means is acting on said valves for seating the valve in said outlet chamber and for unseating the other valve and fluid conducting means including a choke connecting said inlet chamber to said bore.

D2 discloses a dual-function valve assembly provided with a pair of resilient washer shaped first and second closure members spaced apart by a tubular spacer. A coil spring provides a controlling movement of the valve assembly.

The apparatus for controlling flow in a flowline stated in claim 1 differs from prior art disclosed in each of D1 and D2 respectively in that the reduction of the flow in the flow passage is larger when the hindering means is in the first and the second positions than when the hindering means is in an intermediate position between said first and said second positions. Claim 1 therefore fulfils the requirements of novelty according to Article 33(2).

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: V.

It is not considered as common practice to a person ordinary skilled in the art to use knowledge disclosed in each of D1 and D2 respectively and thus arrive at an apparatus for controlling flow in a flowline stated in claim 1. Claim 1 therefore fulfils the requirements of inventive step according to Article 33(3).

Claim 1 also fulfils the requirements of industrial applicability according to Article 33(4).

Claims 2-35 disclose further features of the invention which fulfil the requirements of patentability stated in paragraphs (2-4) of Article 33.